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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,690	10/03/2003	Ian A. Cody	JJK-0331 (P2002J100)	9954

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EXXONMOBIL RESEARCH AND ENGINEERING COMPANY
P.O. BOX 900
1545 ROUTE 22 EAST
ANNANDALE, NJ 08801-0900

EXAMINER	
NGUYEN, TAM M	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/678,690	CODY ET AL.	
	Examiner	Art Unit	
	Tam M. Nguyen	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/8/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on June 8, 2006 has been entered.

Claim Objections

Claim 45 is objected to because both claims 45 and 35 claim the same limitations while both claims are dependent on claim 28. It appears that claim 45 should be dependent on claim 38. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The expression "the oxygenate is present in an amount of at least 100 wppm" in claim 9, renders the claim indefinite because the expression is inconsistent with the limitation that "100 wppm to 10000 wppm of at least one oxygenate".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7, 9-12, 14-23, 26-34, 36-44, 46, 47, 49-52, 54-63, and 65-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO/01/07538 in view of LaPierre et al. (US 4,431,519).

The WO reference discloses a process for preparing a lubricating base oil from a waxy feed such as an F-T product by subjecting the feed to catalytic dewaxing thereby obtaining a lubricating base oil product. The F-T product may be produced by contacting CO and H_2 with a catalyst such as a cobalt catalyst. The dewaxing catalyst comprises a molecular sieve such as ZSM-48 and a metal such as platinum. The catalyst is reduced before use. Dewaxing conditions include temperatures ranging from 200 to 500°C, pressures ranging from 10 to 200 bar (1000 to 20000 kPa), space velocities ranging from 0.1 to 10, and hydrogen to oil ratios ranging from 100 to 2000. See page 2, line 25 through page 6, line 8 and page 7, line 18 through page 10, line 16.

The WO reference does not disclose contacting the dewaxing catalyst with an oxygenate and its amount as claimed, does not disclose that the catalyst is sulfided, does not specifically disclose that the waxy feed contains at least about 15 wt. % of wax.

The LaPierre reference discloses a dewaxing process in which a lubricating oil and hydrogen contact a dewaxing catalyst at temperatures ranging from 550° to 1100°F (288° to 593°C) and pressures ranging from 100 to 3000 psig (689 to 20684 kPa), LHSV values ranging from 0.1 to 10, and a hydrogen to hydrocarbon mole ratio between 1 and 20. The catalyst is contacted with an oxygenate such as an alcohol or ether to increase the activity of the catalyst. The addition of oxygenates to the oil is in an intermittent or pulsing fashion. This oxygenate is converted into oxygenated products and water. The dewaxing catalyst comprises a molecular sieve such as ZSM-23 and a metal such as platinum The oil comprises more than 15 wt. % wax. LaPierre does not specifically disclose that the catalyst is selectively activated in the contacting step with oxygenate and hydrogen. However, the contacting step of the LaPierre process is

similar to the claimed contacting step. It would be expected that the catalyst of the LaPierre process is selectively activated as claimed. See column 1, line 64 through column 3, line 31.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO reference by contacting the dewaxing catalyst with an oxygenate as suggested by LaPierre because the activity of the catalyst will be increased. One would contact the catalyst with the oxygenate for any time and in any concentration that is effective in achieving the result of increased activity.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO reference by using a waxy feed containing at least 15 wt. % of wax because any waxy hydrocarbon feed can be used in the process. It would be expected that a waxy feed containing the claimed amount of waxy would successfully treated in the process of WO reference.

Claims 1-6, 8-12, 14-22, 24, 26, 27, 48, 49, 56-62, 64, and 66-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/07538 A1 in view of GB 2109402 A.

The WO reference discloses a process for preparing a lubricating base oil from a waxy feed such as an F-T product by subjecting the feed to catalytic dewaxing thereby obtaining a lubricating base oil product. The F-T product may be produced by contacting CO and H_2 with a catalyst such as a cobalt catalyst. The dewaxing catalyst comprises a molecular sieve such as ZSM-48 and a metal such as platinum. Dewaxing conditions include temperatures ranging from 200 to 500°C, pressures ranging from 10 to 200 bar (1000 to 20000 kPa), space velocities ranging from 0.1 to 10, and hydrogen to oil ratios ranging from 100 to 2000. See page 2, line 25 through page 6, line 8 and page 7, line 18 through page 10, line 16.

The WO reference does not disclose contacting the dewaxing catalyst with an oxygenate such as water and its amount and does not specifically disclose that the waxy feed contains at least about 15 wt. % of wax.

The GB reference discloses that the activity of zeolite catalysts used in dewaxing processes can be maintained by contacting the catalyst with an oxygenate such as water or precursor of water such as an alcohol. The addition of water is made in a pulsed fashion. See page 1, lines 62-87 and page 2, line 112 through page 3, line 99.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO reference by contacting the catalyst with water as suggested by the GB reference because this type of catalyst is effective for dewaxing and its activity will be maintained by contacting it with water. One would contact the catalyst with the oxygenate for any time and in any concentration that is effective in achieving the result of increased activity

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO reference by using a waxy feed containing at least 15 wt. % of wax because any waxy hydrocarbon feed can be used in the process. It would be expected that a waxy feed containing the claimed amount of waxy would successfully treated in the process of WO reference.

Claims 13, 25, 35, 38-47, 53, and 65 rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claims 1, 16, 25, 49, and 56 above, and further in view of Dougherty et al. (6,294,077).

The WO reference does not specifically disclose the catalyst is sulfided, does not the preliminary treating the feed,

Dougherty discloses a dewaxing process wherein the dewaxing catalyst is pre-sulfided before using. Dougherty also teaches that feedstock is hydrotreated before passing into the dewaxing step (See col. 5, lines 18-36; col. 9, lines 34-39)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the WO reference by sulfiding the catalyst before use because the sulfiding step would prolong the activities of the catalyst.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the WO reference by utilizing a hydrotreating step as suggested by Dougherty because the hydrotreating step would remove undesired contaminants such as sulfur and nitrogen compounds.

Claims 1-7, 9-12, 14-23, 25-34, 36-44, 46, 47, 49-52, 54-63, and 66-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riley (WO 99/41337) in view of LaPierre et al. (US 4,431,519).

Riley discloses a hydroisomerization/dewaxing process wherein a waxy feed is first passing into a hydrotreating zone to remove sulfur and nitrogen compounds from the feed then passed the treated feed into a hydroisomerization zone in the presence a catalyst as claimed. The hydroisomerization process is operated at the same conditions as claimed. (See page 3, line 1 through page 6, line 4)

Riley does not disclose that the dewaxing catalyst is selectively activated with oxygenates as claimed.

The LaPierre reference discloses a dewaxing process in which a lubricating oil and hydrogen contact a dewaxing catalyst at temperatures ranging from 550° to 1100°F (288° to 593°C) and pressures ranging from 100 to 3000 psig (689 to 20684 kPa), LHSV values ranging from 0.1 to 10, and a hydrogen to hydrocarbon mole ratio between 1 and 20. The catalyst is contacted with an oxygenate such as an alcohol or ether to increase the activity of the catalyst. The addition of oxygenates to the oil is in an intermittent or pulsing fashion. This oxygenate is converted into oxygenated products and water. The dewaxing catalyst comprises a molecular sieve such as ZSM-23 and a metal such as platinum. The oil comprises more than 15 wt. % wax. LaPierre does not specifically disclose that the catalyst is selectively activated in the contacting step with oxygenate and hydrogen. However, the contacting step of the LaPierre process is similar to the claimed contacting step. It would be expected that the catalyst of the LaPierre process is selectively activated as claimed. See column 1, line 64 through column 3, line 31.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the Riley reference by contacting the dewaxing catalyst with an oxygenate as suggested by LaPierre because the activity of the catalyst will be increased. One would contact the catalyst with the oxygenate for any time and in any concentration that is effective in achieving the result of increased activity.

Claims 1-6, 8, 16-22, 24, 48, 56-62, 64, and 66-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riley (WO 99/41337) in view of GB 2109402 A.

The process of Riley is as discussed above.

Riley does not disclose that the dewaxing catalyst is selectively activated with oxygenates such as water as claimed.

The GB reference discloses that the activity of zeolite catalysts used in dewaxing processes can be maintained by contacting the catalyst with an oxygenate such as water or precursor of water such as an alcohol. The addition of water is made in a pulsed fashion. See page 1, lines 62-87 and page 2, line 112 through page 3, line 99.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of the Riley reference by contacting the catalyst with water as suggested by the GB reference because this type of catalyst is effective for dewaxing and its activity will be maintained by contacting it with water. One would contact the catalyst with the oxygenate for any time and in any concentration that is effective in achieving the result of increased activity

Claims 13, 25, 35, 45, 53, and 65 rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claims 1, 16, 25, 49, and 56 above, and further in view of Dougherty et al. (6,294,077).

The references as applied to claims 1, 16, 25, 49, and 56 above do not teach that the catalyst is pre-sulfiding.

Dougherty discloses a dewaxing process wherein the dewaxing catalyst is pre-sulfided before using. (See col. 9, lines 34-39)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Riley by sulfiding the catalyst before use because the sulfiding step would prolong the activities of the catalyst.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tam M. Nguyen
Examiner
Art Unit 1764

TN